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I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: May 5, 2005

Signature:

*Marcy Overstreet*  
(Marcy Overstreet)

Docket No.: 34650-00179USC2  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Karl H. Torbjorn, Gardenfors et al.

Application No.: 10/626025

Group Art Unit: 2635

Filed: July 24, 2003

Examiner: B. A. Zimmerman

For: RADIO TRANSCEIVER ON A CHIP

**TRANSMITTAL LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Enclosed are the following items for filing in connection with the above-referenced Patent Application:

1. Fee Transmittal (1 page);
2. Supplemental Information Disclosure Statement (2 pages);
3. IDS (Citation) by Applicant (185 References) (6 pages); and
4. References B1-B16 and C1-C56.

Our check in the amount of \$180.00 covering the required fees is enclosed. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by

this firm) to our Deposit Account No. 10-0447, under Order No. 34650-00179USC2.

Dated: May 5, 2005

Respectfully submitted,

By Michael W. Maddox

Michael W. Maddox

Registration No.: 47,764

JENKENS & GILCHRIST, A PROFESSIONAL  
CORPORATION

1445 Ross Avenue, Suite 3200

Dallas, Texas 75202

(214) 855-4500

Attorneys For Applicant



<b>FEE TRANSMITTAL</b> For FY 2005		<b>Complete if Known</b>	
		Application Number	10/626025-Conf. #1268
		Filing Date	July 24, 2003
		First Named Inventor	Karl H. Torbjorn, Gardenfors
		Examiner Name	B. A. Zimmerman
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27	Art Unit	2635	
<b>TOTAL AMOUNT OF PAYMENT</b>	<b>(\$)</b> 180.00	Attorney Docket No.	34650-00179USC2

<b>METHOD OF PAYMENT</b> (check all that apply)	
<input checked="" type="checkbox"/> Check	<input type="checkbox"/> Credit Card
<input type="checkbox"/> Money Order	<input type="checkbox"/> None
<input type="checkbox"/> Other (please identify):	
<input type="checkbox"/> Deposit Account	Deposit Account Number: 10-0447
Deposit Account Name: Jenkins & Gilchrist, a Professional Corporation	
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)	
<input type="checkbox"/> Charge fee(s) indicated below	<input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee
<input type="checkbox"/> Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17	<input checked="" type="checkbox"/> Credit any overpayments

<b>FEE CALCULATION</b>							
<b>1. BASIC FILING, SEARCH, AND EXAMINATION FEES</b>							
	<b>FILING FEES</b>		<b>SEARCH FEES</b>		<b>EXAMINATION FEES</b>		
		<b>Small Entity</b>		<b>Small Entity</b>		<b>Small Entity</b>	
<b>Application Type</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fees Paid (\$)</b>
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	
<b>2. EXCESS CLAIM FEES</b>							
						<b>Small Entity</b>	
						<b>Fee (\$)</b>	<b>Fee (\$)</b>
Each claim over 20 (including Reissues)						50	25
Each independent claim over 3 (including Reissues)						200	100
Multiple dependent claims						360	180
<b>Total Claims</b>		<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>	<b>Multiple Dependent Claims</b>		
_____		_____	_____	_____	<b>Fee (\$)</b>		<b>Fee Paid (\$)</b>
_____		_____	_____	_____	_____		_____
<b>Indep. Claims</b>		<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>			
_____		_____	_____	_____			
_____		_____	_____	_____			
<b>3. APPLICATION SIZE FEE</b>							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
<b>Total Sheets</b>		<b>Extra Sheets</b>	<b>Number of each additional 50 or fraction thereof</b>		<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>	
_____		_____	_____		_____	_____	
_____ - 100 = _____		/50	_____ (round up to a whole number) x _____		= _____	_____	
<b>4. OTHER FEE(S)</b>							
						<b>Fees Paid (\$)</b>	
Non-English Specification, \$130 fee (no small entity discount)							
Other (e.g., late filing surcharge): 1806 Submission of an Information Disclosure Statement							180.00

<b>SUBMITTED BY</b>			
Signature	<i>Michael W. Maddox</i>	Registration No. (Attorney/Agent)	47,764
Name (Print/Type)	Michael W. Maddox	Telephone	(214) 855-4614
		Date	May 5, 2005

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Dated: May 5, 2005	Signature: <i>Marcy Overstreet</i> (Marcy Overstreet)



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Docket No.: 34650-00179USC2  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Karl H. Torbjorn, Gardenfors et al.

Application No.: 10/626025

Confirmation No.: 1268

Filed: July 24, 2003

Art Unit: 2635

For: RADIO TRANSCEIVER ON A CHIP

Examiner: B. A. Zimmerman

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, OR more than three months after the date of entry of the national stage of a PCT application, AND after the mailing date of the first Office Action on the merits, whichever occurs first, but before the mailing date of a Final Office Action or Notice of Allowance (37 CFR 1.97(c)).

A copy of each foreign patent and non patent literature documents reference on the PTO/SB/08 is attached.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing

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of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Our check in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p) is enclosed. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 10-0447, under Order No. 34650-00179USC2.

Dated: May 5, 2005

Respectfully submitted,

By Michael W. Maddox

Michael W. Maddox

Registration No.: 47,764

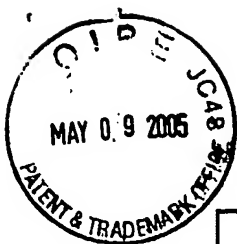
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ALTERNATIVE TO PTO/SB/08a/b (06-03)

<b>Substitute for form 1449/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/626025-Conf. #1268
				Filing Date	July 24, 2003
				First Named Inventor	Karl H. Torbjorn, Gardenfors
				Art Unit	2635
				Examiner Name	B. A. Zimmerman
Sheet	1	of	6	Attorney Docket Number	34650-00179USC2

U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number-Kind Code <sup>2</sup> (if known)		
	A1	US-4,888,557	12-19-1989	Puckette, IV et al.
	A2	US-5,241,702	08-31-1993	Dent
	A3	US-5,802,463	09-01-1998	Zuckerman
	A4	US-5,828,955	10-27-1998	Lipowski et al.
	A5	US-5,875,212	02-23-1999	Fleek et al.
	A6	US-5,339,463	08-16-1994	Hansen
	A7	US-5,369,470	11-29-1994	Hansen
	A8	US-5,715,529	02-03-1998	Kianush et al.
	A9	US-5,404,589	04-04-1995	Bijker et al.
	A10	US-5,561,689	10-01-1996	Fleek et al.
	A11	US-5,838,730	11-17-1998	Cripps
	A12	US-5,751,188	05-12-1998	Guegnaud et al.
	A13	US-5,649,288	07-15-1997	De Loe, Jr., et al.
	A14	US-5,367,539	11-22-1994	Copley
	A15	US-5,734,976	03-31-1998	Bartschi et al.
	A16	US-5,694,417	12-02-1997	Andren et al.
	A17	US-5,194,829	03-16-1993	Schoffel
	A18	US-5,584,068	12-10-1996	Mohindra
	A19	US-5,890,055	03-30-1999	Chu et al.
	A20	US-5,781,847	07-14-1998	Clarke et al.
	A21	US-5,896,375	04-20-1999	Dent et al.
	A22	US-5,757,531	05-26-1998	Tomesen et al.
	A23	US-5,491,457	02-13-1996	Feher
	A24	US-5,802,117	09-01-1998	Ghosh
	A25	US-5,808,569	09-15-1998	Wuppermann et al.
	A26	US-5,809,015	09-15-1998	Elliott et al.
	A27	US-5,809,096	09-15-1998	Martinez et al.
	A28	US-5,822,378	10-13-1998	Van Veldhuizen
	A29	US-5,848,107	12-08-1998	Philips
	A30	US-5,710,993	01-20-1998	Brekelmans
	A31	US-5,272,534	12-21-1993	Vromans et al.
	A32	US-5,751,249	05-12-1998	Baltus et al.
	A33	US-5,761,613	06-02-1998	Saunders et al.
	A34	US-5,784,414	07-21-1998	Bruekers et al.
	A35	US-5,796,730	08-18-1998	Bellec
	A36	US-5,799,042	08-25-1998	Xiao
	A37	US-5,854,973	12-29-1998	Holtvoeth
	A38	US-5,548,831	08-20-1996	Bijker et al.
	A39	US-5,241,561	08-31-1993	Barnard
	A40	US-5,438,692	08-01-1995	Mohindra
	A41	US-5,604,927	02-18-1997	Moore
	A42	US-5,619,491	04-08-1997	Panzer
	A43	US-5,548,582	08-20-1996	Brajal et al.
	A44	US-5,155,862	10-13-1992	Hansen
	A45	US-4,470,071	09-04-1984	Rindal
	A46	US-4,896,374	01-23-1990	Waugh et al.
	A47	US-5,033,110	07-16-1991	Harman
Examiner Signature			Date Considered	

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete If Known</b>	
				Application Number	10/626025-Conf. #1268
				Filing Date	July 24, 2003
				First Named Inventor	Karl H. Torbjorn, Gardenfors
				Art Unit	2635
				Examiner Name	B. A. Zimmerman
Sheet	2	of	6	Attorney Docket Number	34650-00179USC2

A48	US-5,079,526	01-07-1992	Heck
A49	US-5,162,723	11-10-1992	Marzalek et al.
A50	US-5,307,517	04-26-1994	Rich
A51	US-5,313,173	05-17-1994	Lample
A52	US-5,410,733	04-25-1995	Niva et al.
A53	US-5,471,665	11-28-1995	Pace et al.
A54	US-5,550,865	08-27-1996	Cripps
A55	US-5,673,323	09-30-1997	Schotz et al.
A56	US-5,715,281	02-03-1998	Bly, deceased, et al.
A57	US-5,724,653	03-03-1998	Baker et al.
A58	US-5,832,043	11-03-1998	Eory
A59	US-5,867,535	02-02-1999	Phillips et al.
A60	US-6,006,081	12-21-1999	Moore
A61	US-6,374,094	04-16-2002	Zappala
A62	US-4,523,324	06-11-1985	Marshall
A63	US-4,718,113	01-05-1988	Rother
A64	US-5,126,682	06-30-1992	Weinberg
A65	US-5,251,218	10-05-1993	Stone et al.
A66	US-5,263,194	11-16-1993	Ragan
A67	US-5,828,705	10-27-1998	Kroeger et al.
A68	US-5,999,802	12-07-1999	Aschwanden
A69	US-6,028,885	02-22-2000	Minarik et al.
A70	US-6,035,186	03-07-2000	Moore
A71	US-6,374,093	04-16-2002	Pesola
A72	US-6,560,447	05-06-2003	Rahman et al.
A73	US-6,597,748	07-22-2003	Hietala et al.
A74	US-5,550,596	11-24-1995	Strolle
A75	US-5,710,998	01-20-1998	Opas
A76	US-5,963,273	12-10-1996	Boie
A77	US-5,282,228	12-09-1991	Scott
A78	US-4,476,585	01-25-1982	Reed
A79	US-5,517,530	06-26-1995	Gardner
A80	US-4,817,198	12-09-1985	Rinderle
A81	US-5,926,513	10-14-2003	Suominen
A82	US-4,551,688	11-05-1985	Craiglow
A83	US-4,893,316	01-09-1990	Janc et al.
A84	US-4,972,455	11-20-1990	Phillips et al.
A85	US-5,020,092	05-28-1991	Phillips et al.
A86	US-5,052,027	09-24-1991	Poklemba et al.
A87	US-5,396,520	03-07-1995	Degges
A88	US-5,537,435	07-16-1996	Carney et al.
A89	US-5,619,536	04-08-1997	Gourgue
A90	US-5,640,416	06-17-1997	Chalmers
A91	US-5,661,487	08-26-1997	Targoff
A92	US-4,653,117	03-24-1987	Heck
A93	US-4,852,123	07-25-1989	Bickley et al.
A94	US-5,222,144	06-22-1993	Whitehart
A95	US-4,633,315	01-21-1981	Kasperkovitz
A96	US-4,569,085	02-04-1986	Nolde et al.
A97	US-4,523,328	06-11-1985	Kasperkovitz
A98	US-4,426,735	01-17-1984	Kasperkovitz

Examiner Signature		Date Considered	
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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete If Known</b>	
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				Art Unit	2635
				Examiner Name	B. A. Zimmerman
Sheet	3	of	6	Attorney Docket Number	34650-00179USC2

	A99	US-5,901,349	05-04-1999	Guegnaud et al.
	A100	US-5,521,548	05-28-1996	Sugawara
	A101	US-5,430,770	07-04-1995	Abbey
	A102	US-5,440,587	08-08-1995	Ishikawa et al.
	A103	US-5,212,825	05-18-1993	Layton
	A104	US-5,134,404	07-28-1992	Peterson
	A105	US-4,776,039	10-04-1988	Akaiwa
	A106	US-4,633,315	12-30-1986	Kasperkovitz
	A107	US-4,837,853	06-06-1989	Heck
	A108	US-4,926,443	05-15-1990	Reich
	A109	US-6,633,979	10-14-2003	Smeets
	A110	US-2002/0090924	07-11-2002	Suominen
	A111	US-5,324,396	06-28-1994	Ferron et al.
	A112	US-6,477,148	11-05-2002	Gardenfors et al.
	A113	US-6,633,550	10-14-2003	Gardenfors et al.

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T <sup>2</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)			
	B1	WO-02/35718 A2	05-02-2002	Sayers et al.	
	B2	EP-1 249 076 B1	02-18-2004	Sayers et al.	
	B3	EP-0 470 481 B1	10-30-1996	Wignot et al.	
	B4	EP-0 472 119 B1	12-20-1995	Wignot et al.	
	B5	EP-0 512 374 B1	08-28-1996	Kim	
	B6	EP-0 470 484 B1	09-25-1996	Wignot et al.	
	B7	EP-1058399	12-06-2000	Naoki et al.	
	B8	GB 2295513	05-29-1996	Forster	
	B9	EP-0855804	07-29-1998	Suominen	
	B10	WO-95 10889	04-20-1995	Dent	
	B11	WO-96 28946	09-19-1996	Carney et al.	
	B12	EP-0 598 227 A1	05-25-1994	Kluge et al.	
	B13	GB-2052196	01-21-1981	Richardson	
	B14	CA-1,304,786	07-07-1992	Janc et al.	
	B15	CA-1,318,358	05-25-1993	Janc et al.	
	B16	WO-98 11672	03-19-1998	Suominen	

\*EXAMINER: Initial if information considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C1	ERICSSON, Ericsson Technology Licensing – Bluetooth, pp. 1-5; <a href="http://www.ericsson.com/bluetooth">www.ericsson.com/bluetooth</a> < <a href="http://www.ericsson.com/bluetooth">http://www.ericsson.com/bluetooth</a> >; July 23, 2004	
	C2	GENTILE, KEN, Fundamentals of Digital Quadrature Modulation; "RF Mixed Signals", pp. 1-5; <a href="http://www.rfdesign.com">www.rfdesign.com</a> < <a href="http://www.rfdesign.com">http://www.rfdesign.com</a> >; February 2003	
Examiner Signature			Date Considered

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete If Known</b>	
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				Art Unit	2635
				Examiner Name	B. A. Zimmerman
Sheet	4	of	6	Attorney Docket Number	34650-00179USC2

C3	Wireless, RF, and Cable; Application Note 686, pp. 1-7; <a href="http://www.maxim-ic.com">www.maxim-ic.com</a> < <a href="http://www.maxim-ic.com">http://www.maxim-ic.com</a> >; October 13, 2000
C4	STEBER, J. M., "PSK Demodulation" (Part 1); WJ Tech-note; Vol. 11, No. 2, pp. 1-6; WJ Communications, Inc.; San Jose, CA; March 1984
C5	FAGUE, D. E. et al., "Performance Evaluation of a Low Cost, Solid State Radio Front End for DECT"; IEEE; pp. 512-515; 1994
C6	MIN, J., "Analysis & Design of a Frequency-Hopped Spread-Spectrum Transceiver for Wireless Personal Communications"; UCLA Electrical Engineering Dept.; Los Angeles, CA; pp. 1-158; January, 1996
C7	STEYAERT, M. et al., "Analog Polyphase Filters in Highly Integrated Receivers", AACD; Heverlee, Belgium; pp. 364-369; March 30, 1994
C8	STEYAERT, M. et al., "Analog Integrated Polyphase Filters"; Analog Circuit Design.; Eindhoven, Netherlands; pp. 149-166; 1995
C9	DEFrance, J. J., <u>Communications Electronics Circuits</u> ; Holt Rinehart & Winston, New York, NY; pp. 262-265; 1966
C10	ROBERTS, R.S., <u>Television Engineering</u> ; Pentech Press, London, England; pp. 45-47; 1985
C11	BALTUS, P. et al., "DECT Zero IF Receiver Front End"; Analog Circuit Design; Kluwer Academic Publishers; pp. 295-318; Netherlands; 1994
C12	RABAEY, D. et al., "The Challenges for Analog Circuit Design in Mobile Radio VLSI Chips"; Analog Circuit Design; Kluwer Academic Publishers, Netherlands; pp. 225-236; 1994
C13	SEVENHANS, J. et al., "An Integrated Si Biopolar RF Transceiver for a Zero IF 900 MHz GSM Digital Mobile Radio Frontend of a Hand Portable Phone"; 1991 IEEE Custom Integrated Circuits Conference; pp. 7.7.1 - 7.7.4; 1991
C14	OKANOBU, T. et al., "Advanced Low Voltage Single Chip Radio IC"; IEEE Transactions on Consumer Electronics; Vol. 38 No. 3; pp. 465-475; August 1992
C15	CROLS, J. et al., "A Fully Integrated 900 MHz CMOS Double Quadrature Downconverter"; 1995 IEEE International Solid-State Conference; pp. 136-137; February 1995
C16	MIN, J., LIU et al., "A Low-Power Correlation Detector for Binary FSK Direct-Conversion Receivers"; UCLA, Los Angeles, CA; June 22, 1995
C17	CHAN, P.Y. et al., "A Highly Linear 1-GHz CMOS Downconversion Mixer"; European Solid State Circuits Conference; Seville, Spain; pp. 210-213, slides p. 1-25; September 22, 1993
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				Application Number	10/626025-Conf. #1268
				Filing Date	July 24, 2003
				First Named Inventor	Karl H. Torbjorn, Gardenfors
				Art Unit	2635
				Examiner Name	B. A. Zimmerman
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